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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,179	02/26/2002	Nobuhiko Takekoshi	03500.016224	2417

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EXAMINER

CHAN, SING P

ART UNIT	PAPER NUMBER
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1734

6

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,179

Applicant(s)

TAKEKOSHI, NOBUHIKO

Examiner

Sing P Chan

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear what is meant by "means for changing a temperature of said drying means between before and when the laminate object is conveyed to said drying means" and specifically the phase is unclear as to when the laminate object is conveyed to the drying mean. The specification recites a means for changing the temperature of the drying means prior to conveying the laminate object to the drying means. For the purpose of examination, "means for changing a temperature of said drying means prior to conveying said laminate object to said drying means" will be assumed.

Regarding claim 7, it is unclear what is applicant meant with the phase "according head." For the purpose of examination, "a recording head" will be assumed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueda et al (U.S. 5,217,561).

Regarding 1 and 2, Ueda et al discloses a laminating apparatus. The apparatus includes a rollers and belt as laminate object conveying means, transfer sheets, i.e. a laminate object, a laminating unit, i.e. laminate means, and a density detecting sensor to automatically control the temperature of the transfer sheet dryer, which are adjusted higher or lower prior to the sheet is conveyed to the dryer. (Col 2, line 44 to Col 3, line 16, Col 8, line 59 to Col 9, line 54)

Regarding claim 7, Ueda et al discloses an ink jet head for discharging ink onto the transfer sheet. (Col 9, lines 48-54)

Regarding claim 8, Ueda et al discloses the thermal energy for the ink jet is provided by an electrothermal converter. (Col 9, lines 58-68)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al (U.S. 5,217,561) as applied to claim 1 above, and further in view of Takahashi et al (5,574,538).

Regarding claim 3, Ueda et al as disclosed in the above 102(b) rejection does not disclose upper and lower drying roller for the transfer sheet. However, one in the art would appreciate using a drying roller, which the surface of the roller would move with the transfer sheet to prevent movement between the sheet surface with the wet ink and the drying surface of the dryer and prevent smearing of the ink. For example, Takahashi et al discloses drying unit for transfer paper sheet with upper and lower drying rollers (Col 9, lines 51-63)

It would have been obvious to one skilled in the art at the time the invention was made to provide drying rollers as disclosed by Takahashi et al in the apparatus of Ueda et al to allow fast and quick drying of the printed ink and prevent smearing of the ink.

Regarding claim 4, Ueda et al discloses dryer can be a combination of the temperature control of the heater and transport speed, which is considered capable of controlling the lower drying roller and transport the transfer sheet to the drying roller before the lower drying roller rotates one revolution after the temperature is change. (Col 9, lines 31-44)

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al (U.S. 5,217,561) as applied to claim 1 above, and further in view of Sheldon (U.S. 4,879,268).

Ueda et al as disclosed in the above 102(b) rejection does not disclose a heat transferring head disposed at a side of a surface and a roller disposed at a side of a back surface of the laminate object. However, one in the art would appreciate any heating means can be used to laminate the film onto the transfer sheet. For example,

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Sheldon discloses a heat transfer head with a roller opposite position for sandwiching the transfer sheets in between to heat and transfer a coating onto a surface of a sheet. (Col 2, lines 53-62)

It would have been obvious to one skilled in the art at the time the invention was made to provide a heat transfer head opposite a roller as disclosed by Sheldon in the apparatus of Ueda et al to provide a simpler heating mechanism for heating the laminate and reducing the required energy usage and reduce operating cost.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al (U.S. 5,217,561) in view of Sheldon (U.S. 4,879,268) as applied to claim 5 above, and further in view of Hanabusa (JP 62-233264).

Ueda et al as modified above is silent as the heat transferring head has an electrothermal converter. However, providing an electrothermal converter is well known and conventional as shown for example by Hanabusa. Hanabusa discloses a heat transferring head with an electrothermal converter to heat the head, which provide good adhesion to the laminate layer with heat efficiently requiring little electric power. (Page 4, Col 1, lines 5-16, as translated by translator)

It would have been obvious to one skilled in the art the time the invention was made to provide electrothermal converter in the heat transfer head as disclosed by Hanabusa in the apparatus of Ueda et al to provide heating energy to the heat transfer head efficiently with a low requirement of electric power for reducing operating cost.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sing P Chan whose telephone number is 703-305-3175.

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The examiner can normally be reached on Monday-Friday 7:30AM-11:15AM and
12:15PM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone
numbers for the organization where this application or proceeding is assigned are 703-
872-9310 for regular communications and 703-872-9311 for After Final
communications.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is 703-308-
0661.

Chan Sing P.
spc
July 25, 2003

Richard Crispino
RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700